

PATENT COOPERATION TREATY

REC'D 11 APR 2005

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PCT

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

04/08

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/NL2005/000057

International filing date (day/month/year)
26.01.2005

Priority date (day/month/year)
26.01.2004

International Patent Classification (IPC) or both national classification and IPC
A23L1/03, A23L1/0522, A23L1/00, A23D7/015, A23C9/154, A23L1/187

Applicant
WAGENINGEN CENTRE FOR FOOD SCIENCES

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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Authorized Officer

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/NL2005/000057

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
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International application No.
PCT/NL2005/000057

Box No. V. Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-10, 14
	No: Claims	11, 13, 15
Inventive step (IS)	Yes: Claims	1-10, 14
	No: Claims	11, 13, 15
Industrial applicability (IA)	Yes: Claims	1-18
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V.

1. The following documents are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

- D1: ENGELEN LINA ET AL: "A comparison of the effects of added saliva, alpha-amylase and water on texture perception in semisolids." PHYSIOLOGY AND BEHAVIOR, vol. 78, no. 4-5, April 2003 (2003-04), pages 805-811, XP002288968 ISSN: 0031-9384
- D2: VAN RUTH S M ET AL: "Influence of mastication and saliva on aroma release in a model mouth system" FOOD CHEMISTRY, vol. 71, no. 3, 15 November 2000 (2000-11-15), pages 339-345, XP002288969 ISSN: 0308-8146
- D3: US-A-3 955 009 (ESKRITT JAMES D ET AL) 4 May 1976 (1976-05-04)
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- D6: EP-A-1 210 880 (SAN EI GEN FFI INC) 5 June 2002 (2002-06-05)
- D7: US-A-3 505 110 (KESLER CARL C ET AL) 7 April 1970 (1970-04-07)
- D8: WO 02/49443 A (UNILEVER PLC ; LEVER HINDUSTAN LTD (IN); UNILEVER NV (NL); PELAN EDWAR) 27 June 2002 (2002-06-27)

Please consult the citations of relevant passages as given in the search report.

2. The subject-matter of claim 1 and 14 is novel (Art. 33 (2) PCT) and inventive (Art. 33(3) PCT) in view of the prior art available.
3. Claims 11, 13 and 15 are not novel. Semi solid food products comprising modified starch or a starch and either a monosaccharide, a monoglyceride or an acidifying compound are known in the art.
For example D3 discloses a yoghurt-like dessert composition comprising modified tapioca starch and citric acid - the reconstituted dessert mix has a pH of 3-5.
D4 discloses a yoghurt with a pH of 4-4.5 comprising modified starch and citric acid.

Resistant starch tends to be less susceptible to enzymatic breakdown compared to native starch.

Clearly a yoghurt-like product with a pH below 6.3 will have an improved sensory rating over one that has not been acidified (an acid taste is expected of such a yoghurt-like product).

Also, a dessert (cf. D5, D6) comprising starch and glucose will have an improved sensory rating over one that does not contain glucose.

The effect of reducing the starch structure breakdown induced by salivary amylase by the glucose or an acidifying product are not explicitly mentioned in the prior art, will however be inherent.

It appears that the amount of glucose sufficient to arrive at the amylase inhibiting effect does not a priori differ from the conventionally used amounts of glucose.

D7(cf. claim 8) discloses a sugar syrup (i.e. a semi-solid food product) comprising hydroxypropylated polysaccharides (i.e. starch) and hydrolyzed hydroxypropylated starch. The intention is to provide a product for substituting ordinary sugars where it is desired to limit digestion by salivary amylases in the mouth or for substituting artificial sweeteners with a more acceptable sugar product.

4. A positive preliminary examination report for the dependent claims 12 and 16-18 can not be established, since the requirements of the PCT concerning novelty and inventive step for the independent claims are not complied with.
The applicant is however made aware that these dependent claims do not appear to contain any additional subject-matter that could be considered new.

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